



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBST1007-9
Job Sheet 171047



Part No: RBST1007-9

Job Qty: 1 ea

Part Name: Pin



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/26/18

Job Tracking No:

Due Date: 1/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: RBST1000 REV.7 IPP REV:A 18.01.23 NEW ISSUE JFC VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		1/30/18	0.00	0.00	Start Up Machining-3		SC
110	Lathe Conv	1 pcs		1/30/18	0.00	0.50	Lathe Conv-1		J.B. 19-02-18
120	QC	1 pcs		1/30/18	0.00	0.00	QC2 Machining-4		J.B. 19-02-18
130	Mill Conv	1 pcs		1/31/18	0.00	0.25	Mill Conv 1		J.B.
140	QC	1 pcs		1/31/18	0.00	0.00	QC2 Machining-4		J.B. / BA 18-02-19
150	QC	1 pcs		1/31/18	0.00	0.00	QC8 Machining-4		J.C.-L. 18-02-20
180	Outsource	1 pcs		1/31/18	0.00	0.00	Outsource12		AT 18/03/09
190	Packaging	1 pcs		1/31/18	0.00	0.00	Packaging2		AL 08/03/09
200	QC	1 pcs		1/31/18	0.00	0.00	QC6		38
210	Packaging	1 pcs		1/31/18	0.00	0.00	Packaging3-1		9-89
220	QC21-SA	1 Ea		1/31/18	0.00	0.00	QC21		GA 137

Part Op 110 - 1-Machine as per DWG. 2-Deburr

Descriptions: 180 - Issue P/O to Groupe Altech; PO 039090 -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required

MAR 14 2018

FEB 22 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
98378A909	Perforator Pin .129" X 2-1/2"	1 Ea (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	98378A909	1	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Cross tube ☐	Water Jet ☐	Engineering ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Composite ☐	Supplier ☐																																									
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<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: left;">Root Cause</th> </tr> <tr> <td style="width:15%;">Environment ☐</td> <td style="width:15%;">No Re-verification ☐</td> <td style="width:15%;">Pressure/Forced ☐</td> <td style="width:15%;">Temperature/Cure ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> <td>Bending ☐</td> <td>Set-up ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> <td>Cuffs ☐</td> <td>Contamination ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> <td>Crushing ☐</td> <td>Countersink ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> <td colspan="2"></td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> <td colspan="2">OTHER : _____</td> </tr> </table>				Root Cause				Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Past Expiry Date ☐	Manufacturing Process ☐			Misidentified ☐	Past Due ☐	OTHER : _____	
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Date: 02/19/18
 Inspector: _____
 Revision: RBST1000
 Serial No/ Batch: S043560
 Job No: 171047
 Part: RBST1007-9
 Container No: S043560

 DART AEROSPACE
 1270 Aberdeen Street
 Hawkesbury, ON K6A 1K7
 CANADA
 TEL: 1 813 632-6200
 Email: sales@dartaero.com
 www.dartaerospace.com

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

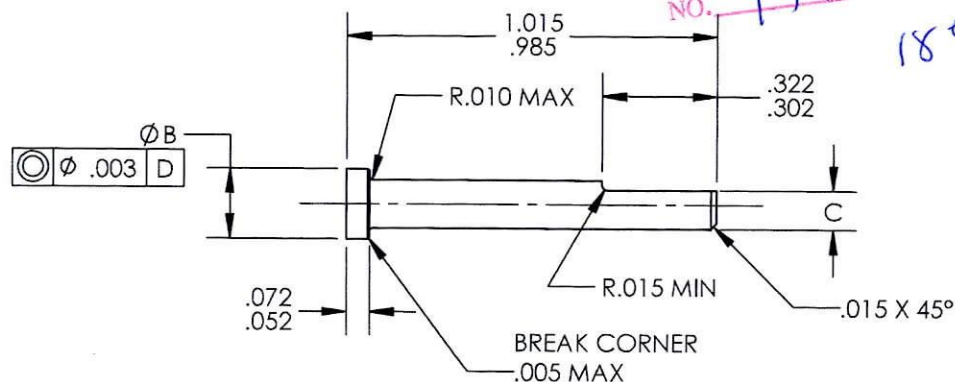
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

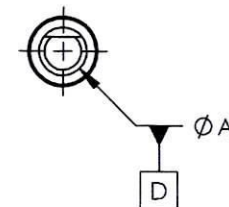
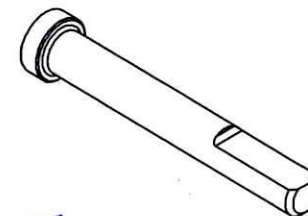
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REVISIONS				DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION				
7	15-0033	-9 ADDED FINISH SPEC QMSI-6.2.2. B.O. REV D.			2/11/2015	DPD SM

TOOL NUMBER	ØA +.000 -.001	ØB +.005 -.002	C +.000 -.020
RBST1000	.099	.156	.074
RBST1001			
RBST1002	.129	.188	.104
RBST1003			
RBST1004			
RBST1005			
RBST1006			
RBST1007			
RBST1008			
RBST1009			
RBST1010			
RBST1011			
RBST1012			
RBST1013			
RBST1014			
RBST1015			
RBST1016			
RBST1017			
RBST1018			
RBST1019			
RBST1020			



SHOP COPY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 171047MCS
1801-26



(-9)

PIN

DART AEROSPACE	
TITLE RBST1000 THRU 1020 DRILL PRESS TRI-ROLLER SWAGING TOOL	
DWG NO. SEE TABLE-9	REV 7
MATL STEEL	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH BLACK OXIDE	.XXX ± .005 FRACTIONS ± 1/8
SPEC QMSI-6.2.2. B.O. REV D	.XX ± .01 ANGLES ± 5°
DRAWN BY: PERRITT	.X ± .1 SURFACES = 125
CHECKED: MACKOVJAK	1. BREAK ALL SHARP EDGES
OPPS APPR: ANDERSON	.015 x 45° OR .015R
QA APPR: LINDSAY	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
APPROVED: MACKOVJAK	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
SCALE 2:1	DATE 1/4/2008
	SHEET 6 OF 9

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By	
					Lead hand / Supervisor Approval Verification	
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Root Cause		FAULT CATEGORY				
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : ☐						



Dart Aerospace Ltd.
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Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

BLANKET PURCHASE ORDER PO039090

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
	172470		Conformity is required parts made from 1144 Steel Proof Round Bar	Firmed	3/1/18	10 pcs	AT 18/03/09 10 pcs	10 pcs	\$0.95/pcs	\$9.50
	171209		parts made from 1144 Steel Proof Round Bar	Firmed	3/1/18	18 pcs	20 pcs AT 18/03/09	18 pcs	\$0.95/pcs	\$17.10
Sub Total:						28	0	28		\$26.60
4		RBE350A94-3700-C-03	Bolt -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required			0 pcs	0 pcs	0 pcs	\$1.79/pcs	
Line Item Note Parts made from Grade B7 Medium Strength Steel										
	170611			Firmed	3/1/18	9 pcs	0 pcs	9 pcs	\$1.79/pcs	\$16.11
Sub Total:						9	0	9		\$16.11
5		RBST2120-9	Pin Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required			0 pcs	0 pcs	0 pcs	\$0.89/pcs	
Line Item Note parts are made from High Speed Tool Steel - Rockwell C60										
	171627			Firmed	3/1/18	4 pcs	AT 18/03/09 4 pcs	4 pcs	\$0.89/pcs	\$3.56
Sub Total:						4	0	4		\$3.56
6		RBST1007-9	Pin Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required			0 pcs	0 pcs	0 pcs	\$0.89/pcs	
Line Item Note Parts made from High-Speed Tool Steel - Rockwell C60										
	171047			Firmed	3/1/18	4 pcs	AT 18/03/09 4 pcs	4 pcs	\$0.89/pcs	\$3.56
Sub Total:						4	0	4		\$3.56
7		RBE350A93-3303-02-5	Extractor Pin -Issue P/O to Groupe Altech; PO _____			0 pcs	0 pcs	0 pcs	\$1.05/pcs	

DAS
38
9-88



Certificat de Conformité / Certificate of Compliance

(007034-2)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

007034 - 2

Livré à / Ship to

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Carrier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
07-Mar-2018		Aman		PO039090				
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	A venir/ Back Order
1	RBE350A94-3700-C-01 Rev.	RBE350A94-3700-C-01 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	18	18	0	0	0
2	RBE350A94-3700-A-03 Rev.	RBE350A94-3700-A-03 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	24	24	0	0	0
3	RBE350A94-3700-C-09 Rev.	RBE350A94-3700-C-09 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	10	10	0	0	0
4	RBE350A94-3700-C-03 Rev.	RBE350A94-3700-C-03 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	9	9	0	0	0
5	RBST2120-9 Rev.	RBST2120-9 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	4	4	0	0	0
6	RBST1007-9 Rev.	RBST1007-9 BLACK OXIDE FINISH, MIL-C-13924C CLASS 1	BLACK-OXIDE CH	4	4	0	0	0
7	RBE350A93-3303-02-5 Rev.	RBE350A93-3303-02-5 01 -BLACK OXIDE ON SST MIL-DTL-13924D BLACK OXIDE FINISH, MIL-C-23942C, CLASS 1	BLACK-OXIDE CH	6	6	0	0	0
8	RBE350A93-3303-02-7 Rev.	RBE350A93-3303-02-7 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	20	20	0	0	0
10	RBT18560-5 Rev.	RBT18560-5 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	6	6	0	0	0
11	RBT18582 Rev.	RBT18582 ZINC PLATE, ASTM B633 TYPE 1 SC2	ZINC CH	6	6	0	0	0
13	RBE350A94-3700-C-09 Rev.	RBE350A94-3700-C-09 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	18	18	0	0	0

DAS
38
9-89



Certificat de Conformité / Certificate of Compliance

(007034-2)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

007034 - 2

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courtier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
07-Mar-2018		Aman		P0039090				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Quantités / Quantities Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Noire responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.